- Reading out said data entities in said permuted memories, in a memory-by-memory fashion.

8. (Amended) A communication system device, comprising a module as in claim 8.

9. (Amended) A spread-spectrum communication apparatus comprising a module as in claim 8.

14. (Newly Added) A communication system device, comprising an integrated circuit device as in claim 9.

15. (Newly Added) A spread-spectrum communication apparatus comprising an integrated circuit device as in claim 9.

REMARKS

The specification has been amended to include headings in accordance with US practice.

The Abstract of the Disclosure has been amended to eliminate reference numbers and to comply with MPEP 608.01(b).

The claims have been amended to removed all multiply dependencies therefrom and to place them into proper U.S. format. Claims 14 and 15 are newly added and are fully supported by the original Specification and claims.

Consideration and allowance of application is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

Respectfully submitted,

6-23-03
Date

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In The Specification

In The Specification

Please amend the specification as follows:

On page 1, delete line 9 in its entirety and insert therefore --- **Discussion of the Background Art** ---.

On page 1, delete line 22 in its entirety.

On page 3, line 8 in its entirety and insert therefore --- **BRIEF DESCRIPTION OF THE DRAWINGS** ---.

On page 3 delete line 18 in its entirety and insert therefore --- **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT** ---.

In The Abstract

Please amend the abstract as follows:

ABSTRACT OF THE DISCLOSURE

~~**Implementation of a column interleaving function with a limited amount of columns**~~

~~The present invention is related to a~~ A method to implement a column interleaving function, comprising the steps of:

- Providing a number of memories equal to the maximum number of columns in the interleaver function,
- Inputting a stream of data entities,
- Writing said data entities successively into a memory, until all memories are completely filled or until all data entities are written,
- Performing selection and permutation on said memories, and
- Reading out said data entities in said permuted memories, in a memory-by-memory fashion.

~~(Figure 3)~~

In The Claims

Please amend the claims as follows:

1. (Amended) Method to implement a column interleaving function, comprising the steps of:

- Providing a number of memories equal to the maximum number of columns in the interleaver function,
- Inputting a stream of data entities,
- Writing said data entities successively into a memory, until all memories are completely filled or until all data entities are written,
- Performing selection and permutation on said memories, and

Reading out said data entities in said permuted memories, in a memory-by-memory fashion.

3. (Amended) Method as in claim 1~~ or 2~~, wherein said data entities are logical ones and zeros.

4. (Amended) Method as in claim 1~~ or 2~~, wherein said data entities are multiple bit words.

5. (Amended) Method as in claim 1 ~~or 2~~, wherein said data entities are three bit words.

7. (Amended) Method as in ~~any of the previous~~ claim~~s~~ 1, wherein the number of columns used in the column interleaver function is changed on the fly, said number of columns not exceeding said maximum number of columns.

8. (Amended) A module for column interleaving, comprising means for applying a method ~~as in any of the previous claims~~ to implement a column interleaving function, comprising the steps of:

- Providing a number of memories equal to the maximum number of columns in the interleaver function,
- Inputting a stream of data entities,
- Writing said data entities successively into a memory, until all memories are completely filled or until all data entities are written,
- Performing selection and permutation on said memories, and
- ~~8.~~ Reading out said data entities in said permuted memories, in a memory-by-memory fashion.

9. (Amended) An integrated circuit device, comprising a module ~~as in claim 8~~for column interleaving, comprising means for applying a method to implement a column interleaving function, comprising the steps of:

- Providing a number of memories equal to the maximum number of columns in the interleaver function,
- Inputting a stream of data entities,
- Writing said data entities successively into a memory, until all memories are completely filled or until all data entities are written,
- Performing selection and permutation on said memories, and
- ~~9.~~ Reading out said data entities in said permuted memories, in a memory-by-memory fashion.

10. (Amended) A communication system device, comprising a module as in claim 8 ~~or an integrated circuit device as in claim 9~~.

11. (Amended) A spread-spectrum communication apparatus comprising a module as in claim 8 ~~or an integrated circuit device as in claim 9~~.

14. (Newly Added) A communication system device, comprising an integrated circuit device as in claim 9.

15. (Newly Added) A spread-spectrum communication apparatus comprising an integrated circuit device as in claim 9.